

REMARKS

Summary of Changes Made

The application was filed with 18 claims. Presently, new claims 19-33 are added while claims 1-18 are canceled. Hence, claims 19-33 (15 claims) remain pending. No new matter is added hereby.

Claim Rejections – 35 U.S.C. 102(b) (Greenberg)

Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by Greenberg et al., U.S. Pat. No. 6,387,487, (“Greenberg”). Greenberg allegedly teaches using curable siloxane compositions as pressure sensitive adhesives in which a pressure sensitive adhesive is added to a curable siloxane composition followed by curing (Example 1).

Claim 13 is canceled herein and no new claim exactly captures the subject matter of claim 13. Hence the rejection is moot.

Claim Rejections – 35 U.S.C. 103(a) (Greenberg)

Claims 1, 3, 5-8, 11 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greenberg. The newly presented claims no longer include the subject matter of claim 5, and new claim 19 corresponds to claim 1, claim 20 corresponds to claim 3, claims 21-22 correspond to claim 6, claims 23-25 correspond to claim 7, claim 26 corresponds to claim 8, claim 28 corresponds to claim 11, and claims 29-32 correspond to claims 14-17, respectively.

Most importantly, claim 19 differs from claim 1 in that claim 19 now precisely defines the curable composition recited therein in terms of the formulas of various constituents (components A, B, C, etc) as well as their proportions.

Indeed, whereas Greenberg’s composition **as a whole** is a Dual-Cure PSA, i.e. an adhesive, the presently claimed composition is a **release coating**, that avoids sticking of an adhesive to a surface, for example used for covering an adhesive tape. That is, upon removing the cover layer having a coating of a release layer, the adhesive layer is uncovered or exposed (see for example new claim 31).

This difference, (on the one hand the release coating composition provided by the present invention , and on the other hand the adhesive coating composition of Greenberg), is also clearly

reflected by the compositional difference between the compositions. In this respect it is important to note that the release composition of the present invention comprises only very small amounts of component D), i.e. up to 10 parts by weight per 100 parts by weight of the reactive siloxane polymer A).

If we compare this with the composition of Greenberg, which comprises:

(A) 20 to about 80 parts by weight of an alkenyl-terminated polydiorganosiloxane

(B) 2 to about 80 parts by weight of a silanol-terminated polydiorganosiloxane

(C) about 20 to about 80 parts by weight of a resinous copolymer.

by setting (A) to 100 parts by weight:

(A) 25 to about 100 parts by weight of an alkenyl-terminated polydiorganosiloxane

(B) 2.5 to about 100 parts by weight of a silanol-terminated polydiorganosiloxane

(C) about 25 to about 100 parts by weight of a resinous copolymer.

and setting the combined total of Greenberg's (B) and (C) (which is instantly claimed component D)) to the minimum:

(A) 100 parts by weight of an alkenyl-terminated polydiorganosiloxane

(B) 2.5 parts by weight of a silanol-terminated polydiorganosiloxane

(C) 25 parts by weight of a resinous copolymer,

we can see that Greenberg's PSA comprises at least 27.5 parts by weight of (B) and (C), combined, (which together correspond to instantly claimed component D)) per 100 parts by weight of component (A) which is far beyond the limitation of at most 10 parts by weight per 100 parts by weight of component (A) in the present release formulation.

Moreover, regarding obviousness over Greenberg, Applicants point out that, because Greenberg is concerned with the provision of a PSA as such, it is accordingly entirely silent about release coatings. Thus, it is clear that the object and solution presented by the instantly claimed invention differs from that disclosed by Greenberg. Whereas the present invention aims

to provide release coatings with modified release properties, Greenberg aims to provide solventless or low-solvent, curable silicone compositions suitable for forming pressure sensitive adhesive compositions having excellent tack and adhesive properties – i.e. just the opposite of a release layer. Accordingly a skilled person in the art would never have started from the Greenberg reference to solve the object of providing release coatings with modified release properties. Thus it is clear to the skilled artisan that Greenberg does not at all render obvious the release coating composition of the present invention. Based on the foregoing, withdrawal of the rejection over Greenberg is respectfully requested.

Claim Rejections – 35 U.S.C. 103(a) (Ballard/Ko)

Claims 1, 3, 6-8, 10, 11 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ballard, U.S. Pat. No. 3,527,655, (“Ballard”), in view of Ko et al., U.S. Pat. No. 5,308,887, (“Ko”).

The Examiner contends that Ballard would not teach that the MQ resin may be a condensate or an addition product of an MQ resin and a substantially linear end-functional polysiloxane gum as required by instant claim 6, which would result in a product having M units, Q units and D units. This is not quite an accurate statement. Ballard is related to a curable self-bonding optionally comprising

(2) from 0 to 50 parts of an organopolysiloxane copolymer comprising $(R'')_3SiO_{0.5}$ units [**M-unit**], $(R'')_2SiO$ units [**D-unit**] and SiO_2 units [**Q-unit**], where ... from 2.5 to 10 mole percent of the silicon atoms contain silicon-bonded vinyl groups.

Column 1, lines 61-71. In other words, Ballard relates to an MDQ resin with reactive vinyl groups.

With regard to the second limitation of claim 1, component D) is selected from polyorganosiloxanes non-reactive with respect to the component A) or B).

In contrast, whereas in Ballard vinyl-SiH-crosslinking of all silicone components including the resinous components take place, in the release coating composition of the present invention the PSA-component D) is non-reactive, i.e. does not contain vinyl or Si-H-groups, thus leading to a completely different composition comprising the PSA component physically

embedded in the cured polysiloxane matrix. Accordingly Ballard provides elastomeric silicone compositions that adhere to a substrate, wherein the surface adhesion properties of the elastomer compositions are **not** modified by a PSA. Ballard's compositions serve in particular as shower stall panels (example 1), molds (example 2), windshields (example 3) and insulating heat shields that have high strength at high temperatures (example 4). Ballard is accordingly entirely silent about release coatings which are used in particular for reversibly adhering adhesive labels, tapes etc., which is the main focus of the present invention.

Furthermore Ballard's component (2) preferably contains D-units in an amount of from about 1 to 10 mole percent based on the total number of moles of siloxane units in the copolymer (col. 3, lines 36-39), whereas the present release coating composition component D) comprises more than 10 mole percent of D-units.

The Examiner refers to Ko as an MQD resin. However, nowhere in Ko is described the PSA in accordance with the definition of component D) of the present invention, which requires:

that if the pressure sensitive adhesive is an organosilicone compound,

- a) the content of the total of T- and Q-units is more than 10 mol-% of all siloxy units,
- b) the content of D-units is more than 10 mol-% of all siloxy units, and
- c) at least 90 mol-% of the organo groups in the organosilicone compound are alkyl groups, and
- d) wherein component D) is selected from non-reactive polyorganosiloxanes with respect to the component A) or B).

Furthermore Ko is related to an acrylate-based radiation curable system that is completely different not only from the instant composition but also from the compositions described by Ballard. The silicon PSA of Ballard may have any conceivable composition and thus does not provide any pointer to any particular silicone resin used as PSA component D) in the present invention.

Again, Ko is related to the provision of PSAs and not to the provision of release coatings that are modified by PSAs.

To summarize – nowhere in any of the cited documents Greenberg, Ballard and Ko is there is any disclosure or suggestion of the silicone-based release coatings that have been disclosed and claimed only in the present application. Based on the foregoing, all claims are

inventive over the cited prior art references, in any combination. Withdrawal of the rejection is respectfully requested.

CONCLUSION

Based on the foregoing, the Applicants respectfully request entry of the instant amendment and a Notice of Allowability for claims 19-33. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application. If there are any additional fees resulting from this communication, please charge the same to our Deposit Account No. 18-0160, our Order No. GEB-16721.

Respectfully submitted,

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